

REMARKS-General

1. In order to overcome the disclosure objection, the applicant has amended to specification to include the reference characters "46B", "M" and "N", as shown in Figures 7 and 10, which is deemed to more clearly and distinctly describe the subject matter of the instant invention, and which provides full antecedent basis to the amended claims. No new matter has been included. A certified copy of the CH 01246118.0 will be submitted before the allowance of the instant invention.

2. The independent claim 1 is amended to further limitations previously brought forth in the disclosure. No new matter has been included. All amended claims 1 and 7-16 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

Response to Rejection of Claims 7-10 under 35USC112

3. The applicant submits that the amended claims 7-10 particularly point out and distinctly claim the subject matter of the instant invention, as pursuant to 35USC112.

Response to Rejection of Claims 1-16, 21-24, 35-37, 39-44 under 35USC103

4. A prima facie case of obviousness requires setting forth:

- (a) the differences in the claim over the applied references,
- (b) the proposed modification of the applied references necessary to arrive at the claimed subject matter, and
- (c) an explanation why such proposed modification would be obvious. MPEP §706.02.

5. The Examiner rejected claims 1-16, 21-24, 35-37 and 39-44 over JP '434 (Japanese 05-240434) in view of Lonergan (U.S. 1,884,764). Pursuant to 35 U.S.C. 103:

"(a) A patent may not be obtained though the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the

subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

6. In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and JP '434 which is qualified as prior art of the instant invention under 35USC102(b) are obvious in view of Lonergan at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

7. JP '434 merely suggests a gas lighter in which a flame is not largely projected out of the lighter, almost of the flame is maintained within a combustion cylinder, the flame is highly resisted against wind, wherein sparks generated from piezoelectric tip 20 ignite mixture gas merely ejected from the single dispersion cylinder 15 to produce the flame within the combustion cylinder 19 to heat the ignition wire(s) 28 for cigarette ignition. It is apparent that the differences between the JP '434 and the instant invention include the following:

In The Independent Claim 1:

(i) an ignition unit generating sparks directed **from a piezoelectric tip thereof toward an ignition chamber;**

(ii) the mix chamber has a diameter sized between 1mm to 2.5 mm and a flow of air is capable of inletting into the mixing chamber through the air inlet;

(iii) a torch nozzle, which is coaxially connected between the root opening of the nozzle body and the fuel valve, **having a micro nozzle pore having a diameter of**

0.05mm to 0.12mm and comprising a mesh filter provided below the nozzle pore for preventing residual particles of the fuel from entering the nozzle body;

(iv) **the fuel released from the fuel valve being vaporized into a strong, pressurized gaseous fuel jetting into the mix chamber, wherein the jetting gaseous fuel and the air flowing through mix chamber are mixed to form a mixture gas at the emitting opening of the nozzle body;**

(v) **two or more elongated nozzle ducts, each having an ignition end and a root end extended and opened into the root chamber, wherein the root ends of the two nozzle ducts are adjacently positioned to define a diversion joint edge therebetween while the two ignition ends of the two nozzle ducts are diverged and extended within the ignition chamber to define a torch gap therebetween, wherein a main portion of the mixture gas at the emitting opening of the nozzle body bursts two or more ejecting beams of the mixture gas at the ignition ends of the nozzle ducts respectively;**

(vi) **a torch stabilizing arrangement diverging a small portion of the mixture gas at the emitting opening of the nozzle body to fill up the ignition chamber, wherein the sparks generated from the piezoelectric tip of the ignition unit first ignite the small portion of the mixture gas filled in the ignition chamber to form a plurality of root flames which are united and mixed to form an environment root flame surrounding the torch head and the ignition ends of the nozzle ducts,**

(vii) **the environment root flame igniting the ejecting beams of the mixture gas burst from the ignition ends of the nozzle ducts to form two or more spaced torches while the environment root flame stabilizing and holding the spaced torches to form a strong and stable group of the torches.**

In The Claim 3:

(viii) **the nozzle body being a tubular throat conduit having a root end forming the root opening, an emitting end forming the emitting opening, wherein the air inlet is transversely formed on the root end and has a diameter slightly larger**

than the diameter of the mix chamber so as to provide a suction force to absorb the air into the mix chamber;

In The Claims 4 :

(ix) the **combustion housing** being a ring shaped body having a **surrounding wall defining the ignition chamber therein and the torch head is coaxially connected to the emitting opening of the nozzle body and supported within the combustion housing;**

In The Claim 6:

(x) a **top end of the torch head being lower than a top end of the combustion housing** and an outer diameter of the torch head is smaller than an inner diameter of the combustion housing;

In The Claims 7-10:

(xi) the diversion joint edge between the roots ends of the nozzle ducts being 1.5mm or less;

In The Claims 11-16:

(xii) the **diversion emitting openings are positioned adjacently below the roots ends of the nozzle ducts**, wherein the large portion of the mixture gas flown into the root chamber is ejected through the two nozzle ducts and **the small portion of the mixture gas is diverged to emit through the diversion emitting openings and fill up the ignition chamber to be ignited to form the environment root flame** surrounding the torch head and the root portions of the torches;

In The Claims 21-24:

(xiii) each of the diversion emitting openings being a **longitudinal slot at least evenly spacedly formed around the root chamber of the torch head;**

In The Claims 35-37:

(xiv) the diameter of the nozzle pore being 0.08mm;

In The Claims 39-44:

(xv) the **torch head is structured as a gear**, wherein the diversion emitting openings of the torch head are longitudinal slots spacedly formed around the torch head, wherein **a bottom portion of the diversion emitting openings are actually a layer of space defined by a top surface of the fuel ignition assembly and a bottom surface of the torch head;**

8. However, the other cited art, Lonergan merely discloses a burner structure that fails to suggest the above distinctive structural features (i) to (xv) of the instant invention. Therefore, this is clearly **not** a proper basis for combining references in making out an obviousness rejection of the claims of the instant invention.

9. The applicant respectfully submits that the invention must be considered as a whole and there must be something in the reference that suggests the combination or the modification. *See Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984) ("The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination"), *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984), ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.") *In re Laskowski*, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989), ("Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.")

10. In the present case, there is no such suggestion. JP '434 and Lonergan perform very different types of apparatus. JP '434 describes a gas lighter to produce flame and Lonergan merely discloses a burner structure, wherein both JP '434 and Lonergan are not designed and constructed to produce torch.

11. In any case, even combining JP '434 and Lonergan would not provide the invention as claimed -- a clear indicia of nonobviousness. *Ex parte Schwartz*, slip op. p.5 (BPA&I Appeal No. 92-2629 October 28, 1992), ("Even if we were to agree with the examiner that it would have been obvious to combine the reference teachings in the manner proposed, the resulting package still would not comprise zipper closure material that terminates short of the end of the one edge of the product containing area, as now claimed."). That is, modifying JP '434 with Lonergan, as proposed by the Examiner, would not provide a torch lighter which can generate two or more torches with one piezoelectric tip.

12. In view of the instant invention, the micro nozzle pore having a diameter of 0.05mm to 0.12mm and the mesh filter are the necessary elements to produce the two or more ejecting beams of mixture gas burst from the ignition ends of the nozzle ducts, wherein neither of the cited arts mentioned such limitations. In addition, the piezoelectric tip of the ignition unit must be positioned closely adjacent to the ignition end of a nozzle duct for all conventional piezoelectric lighter. Applicant believes that neither JP '434 nor Lonergan, separately or in combination, suggest or make any mention whatsoever of how to use one piezoelectric tip to ignite the ignition ends of two or more nozzle ducts, as recited in the amended independent claim 1.

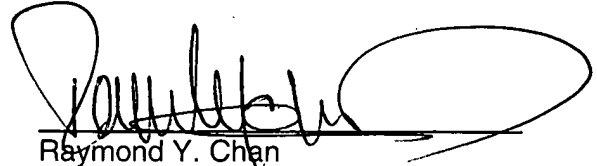
The Cited but Non-Applied References

13. The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

14. In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection are requested. Allowance of claims 1-16, 21-24, 35-37 and 39-44 at an early date is solicited.

15. Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

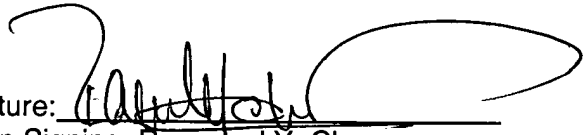


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Signature: 
Person Signing: Raymond Y. Chan